

Fanout Upgrade for a Scalable Switching Network

Abstract: A redundant multistage network can be expanded by increasing the fanout of each router in a non-stop manner, involving a port addition, a reconfiguring and an activation section. The port addition section involves the addition of new ports to each switching element. The reconfiguring section involves the selection of a port and disconnecting any connections necessary to connect that port with its proper corresponding port as derived from the final desired topology. This section can further include the optional permutation of port address to minimize traffic disruption. The activation section involves attaching any new external ports desired to external sources and putting those new connections into service.